



Wood energy workshop  
Belgrade, 26./27 November 2007



# Wood energy energy markets and trade in Europe



by

Florian Steierer



Hamburg University  
Economics of Forest Products  
Department of Wood Science



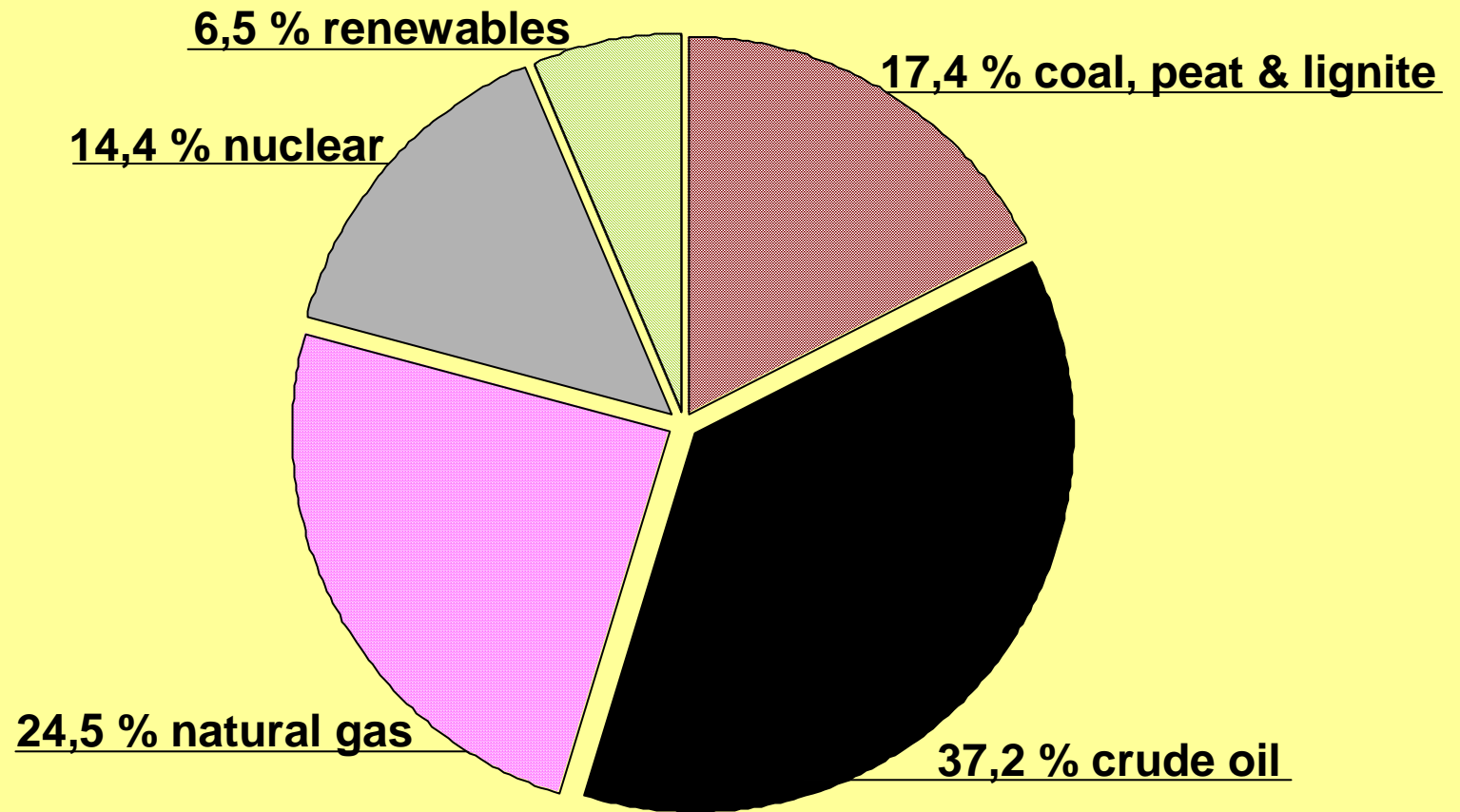
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- **Sources of wood energy**
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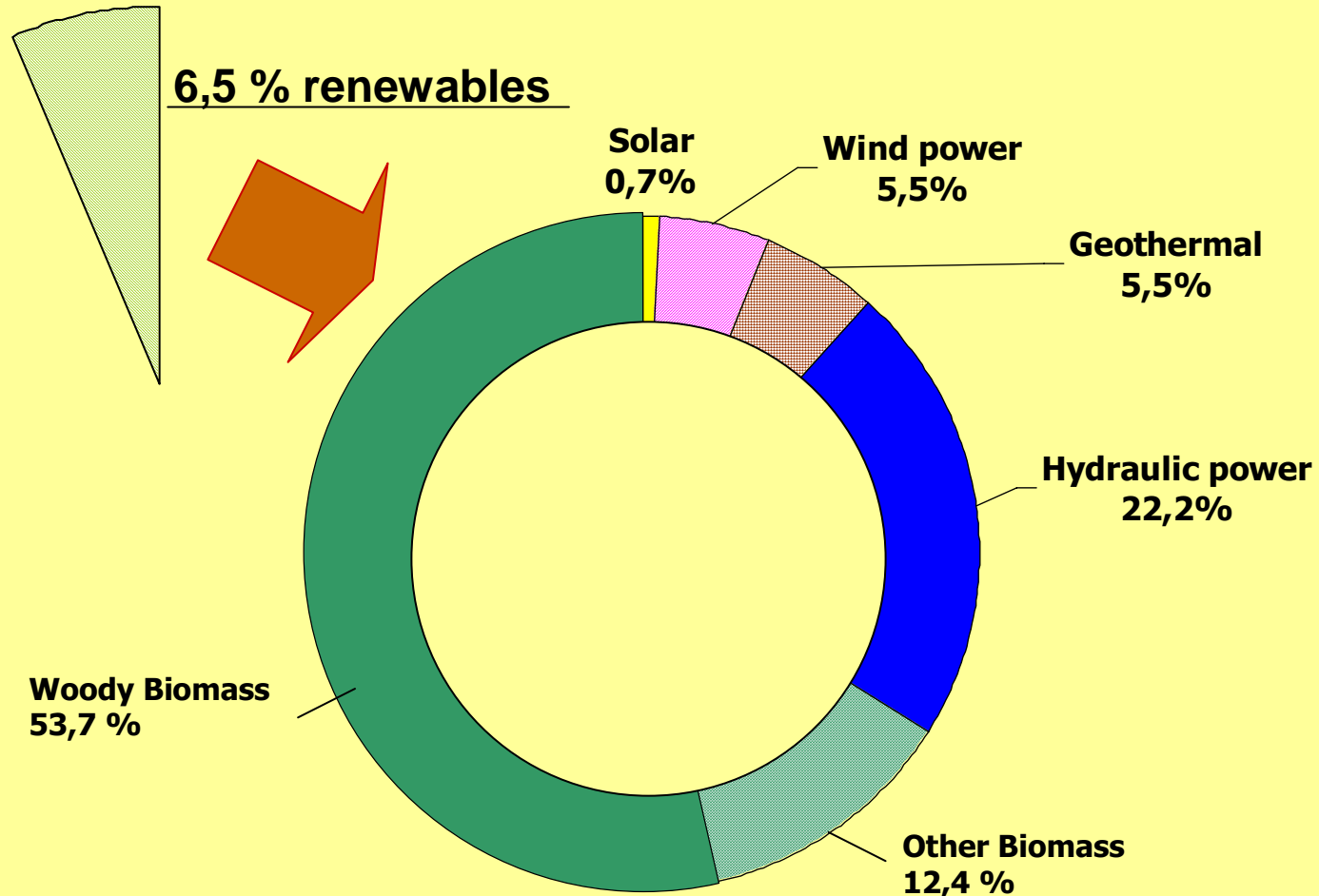
# Energy 2005

## Gross inland consumption (EU 25)



Source: Eurostat (2007): Yearly statistics 2005

# Renewable Energy Sources 2005 (EU 25)

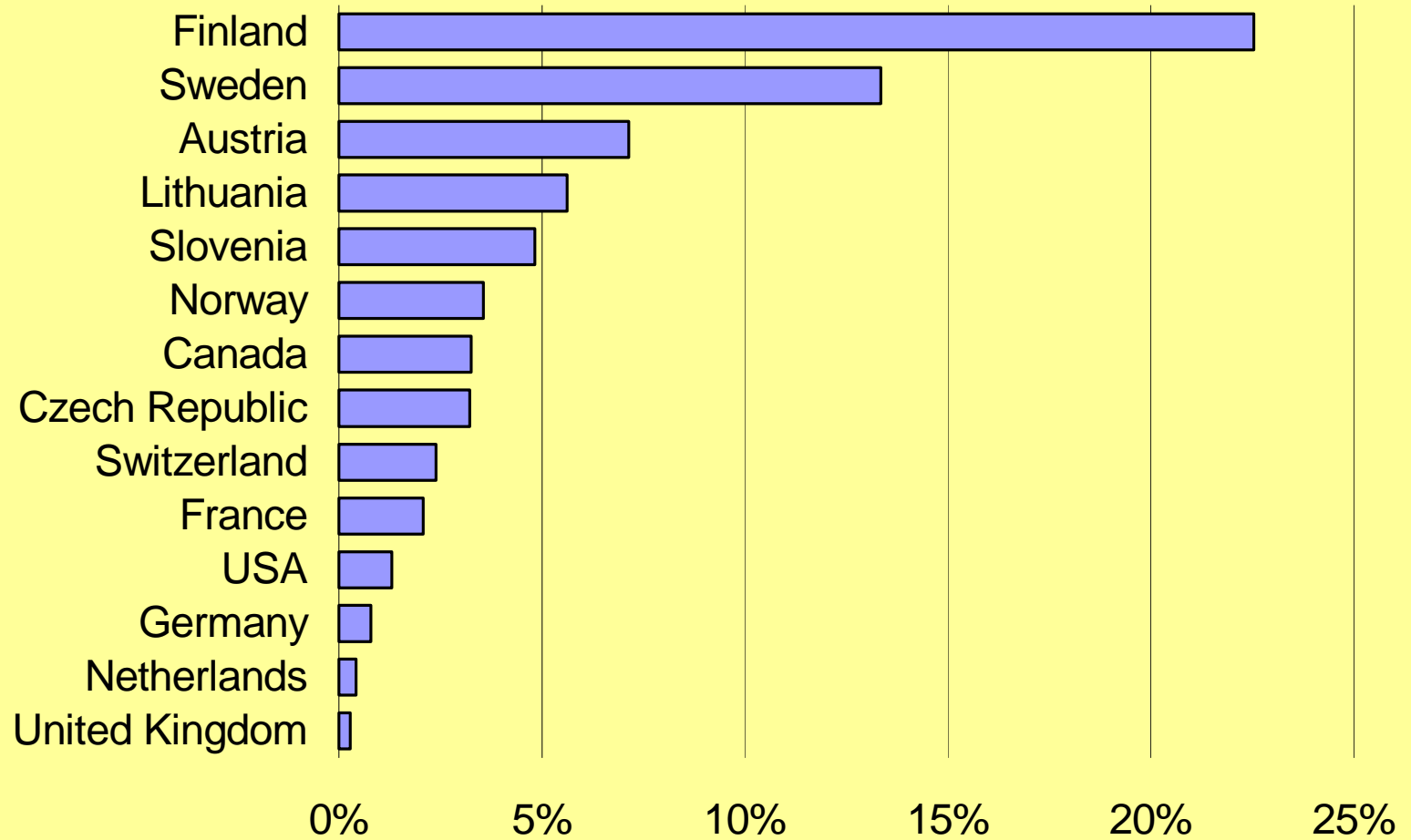


**Wood: N° 1 Renewable energy source**

Source: EurObserv'ER (modified)

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# Wood energy's role



Source: UNECE Joint Wood Energy Enquiry (2007) & IEA Statistics (2006)

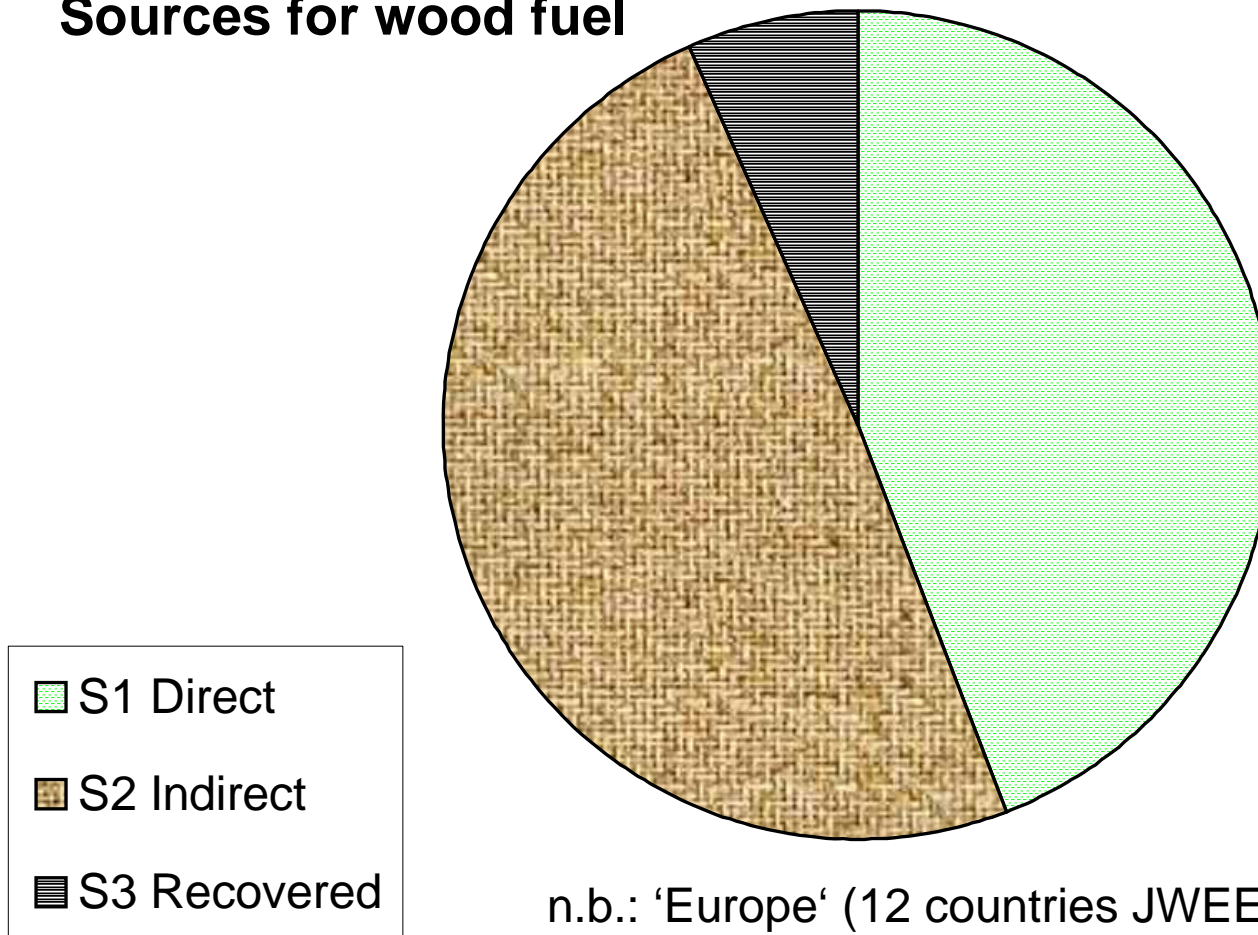
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# Sources of wood energy

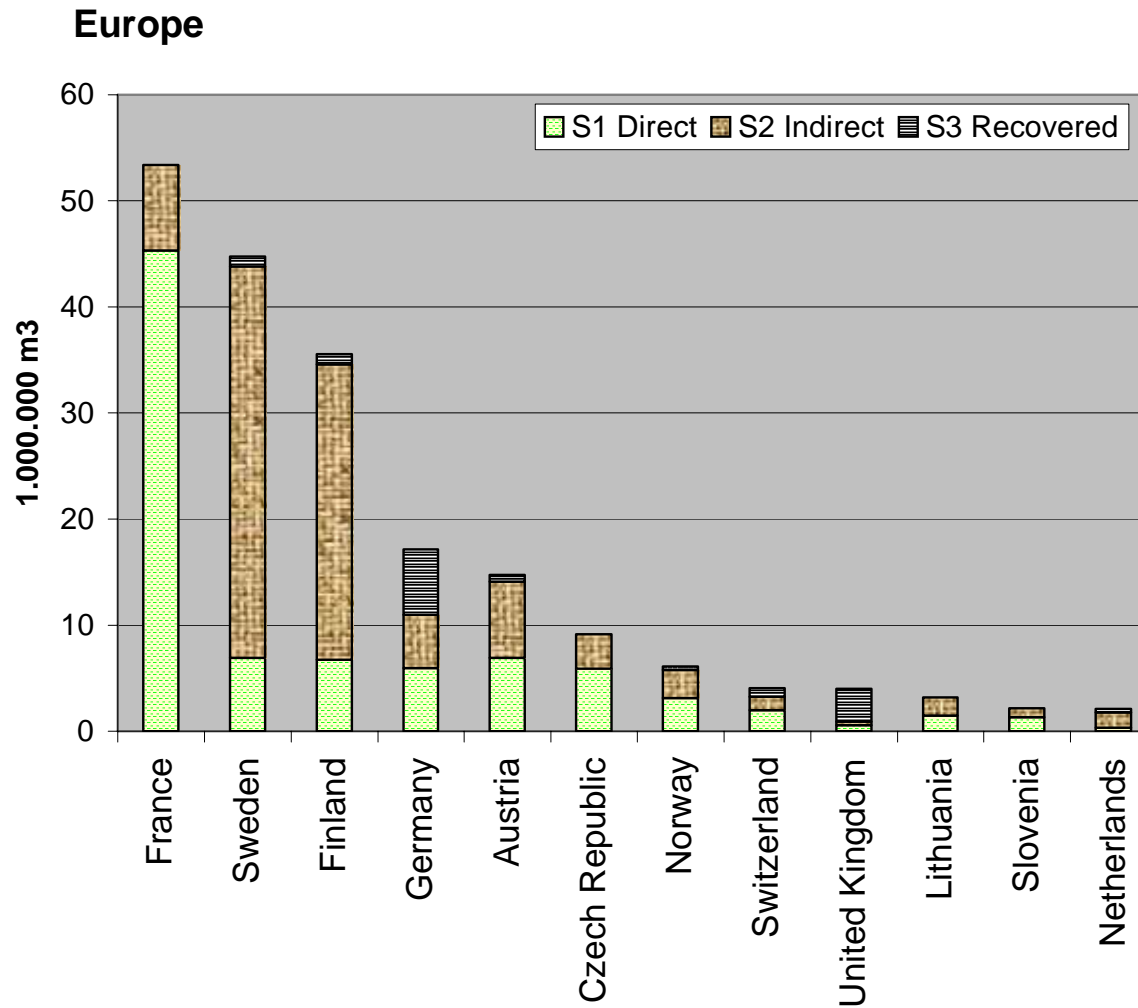


## 'Europe' Sources for wood fuel

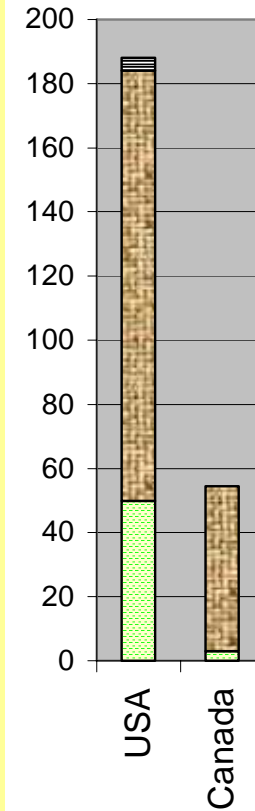


Source: UNECE Joint Wood Energy Enquiry (2007)

# Sources of wood energy



**North America**

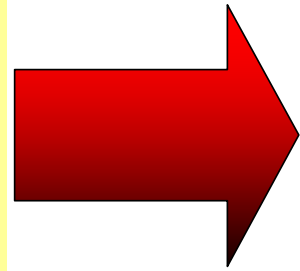


Source: UNECE Joint Wood Energy Enquiry (2007)

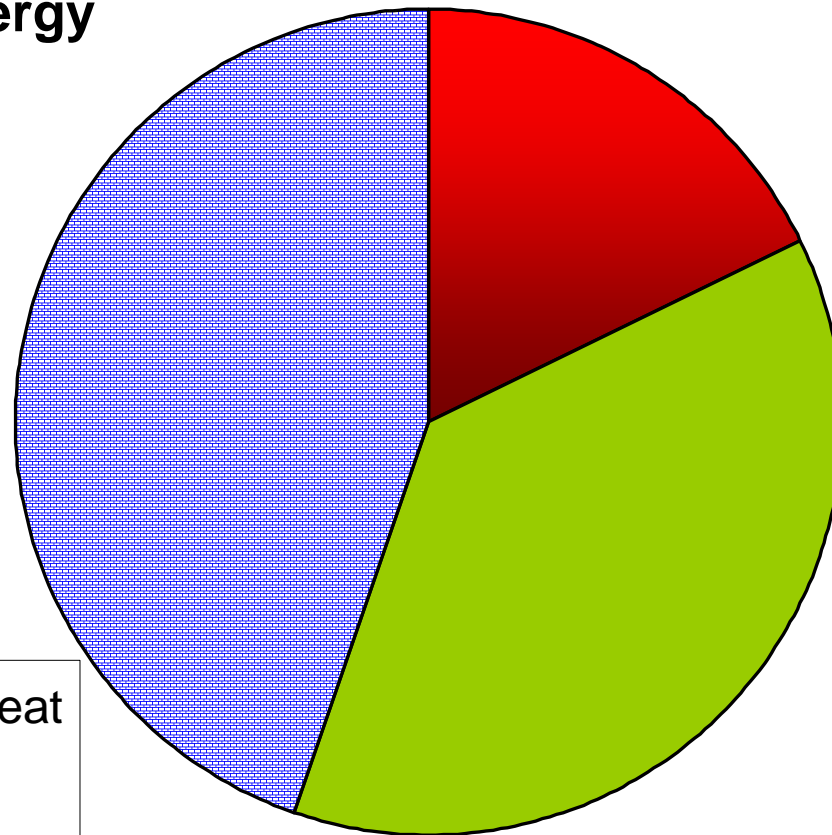
# User of wood energy



'Europe'  
User wood energy



- U1 power and heat
- U2 Industry
- U3 Private

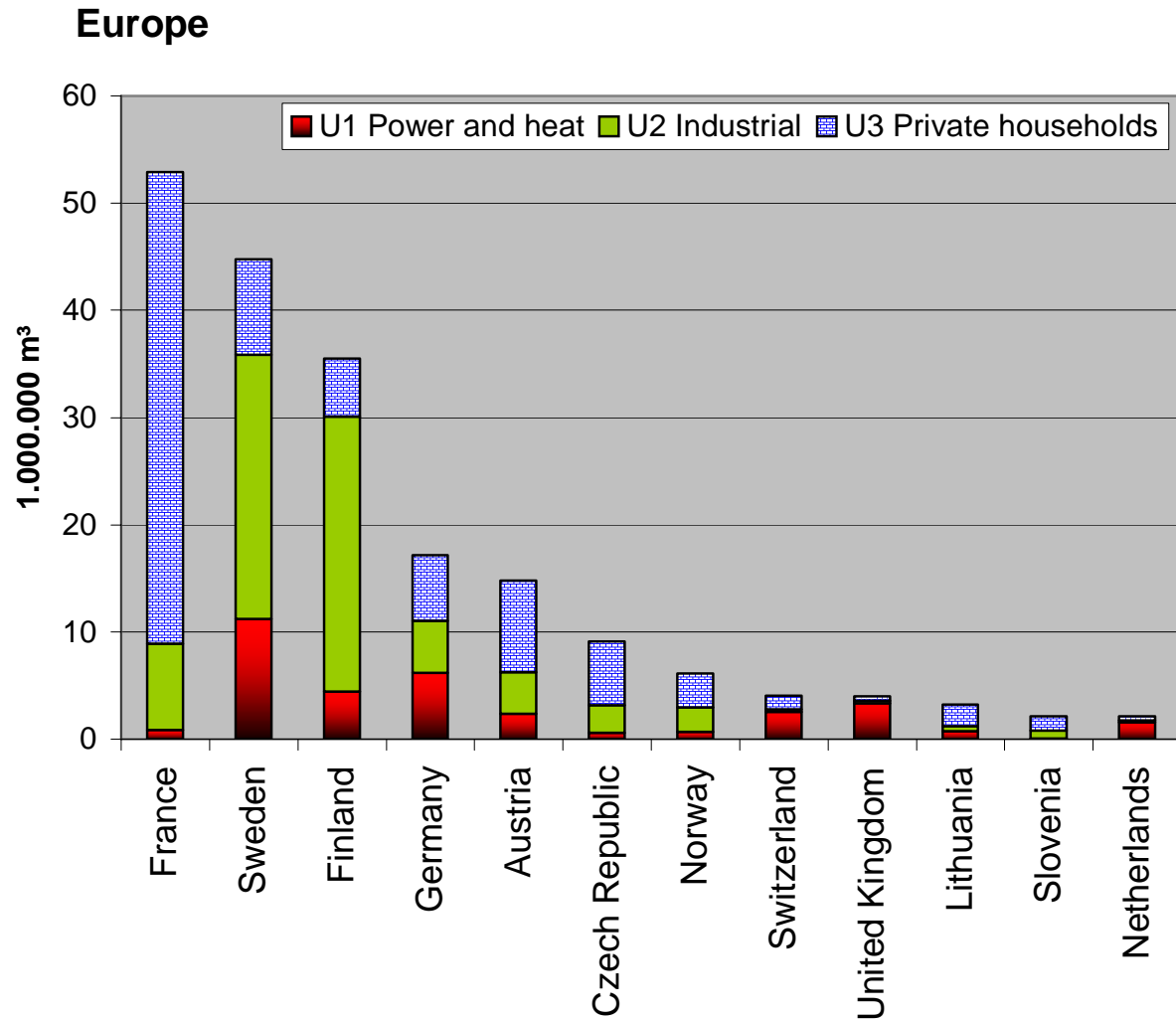


n.b.: 'Europe' (12 countries JWEE)

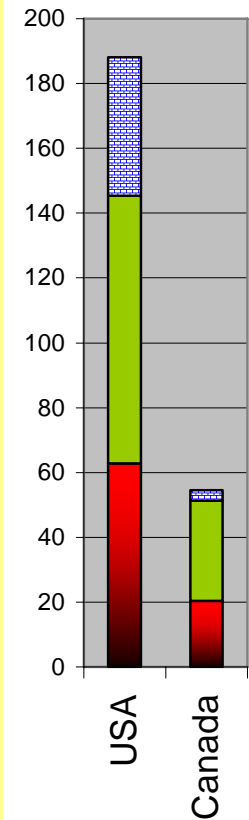
Source: UNECE Joint Wood Energy Enquiry (2007)



# User of wood energy



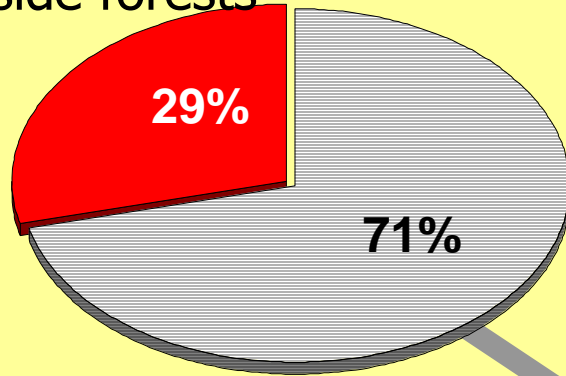
## North America



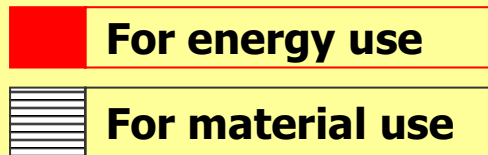
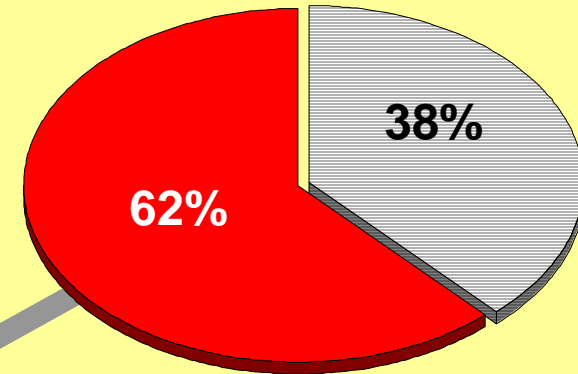
Source: UNECE Joint Wood Energy Enquiry (2007)

# Energy use vs. material use -today

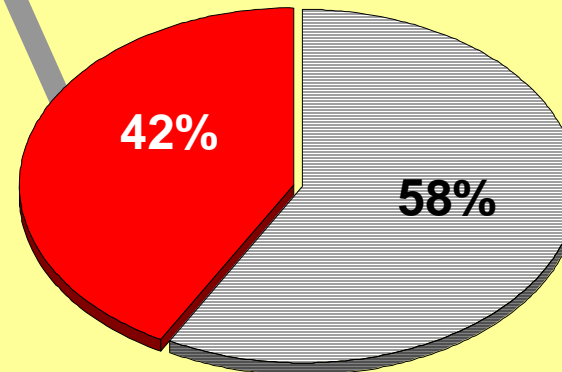
Wood removals 2005  
from forest and woody biomass  
outside forests



Wood co-products, residues  
& recovered wood



Total supply

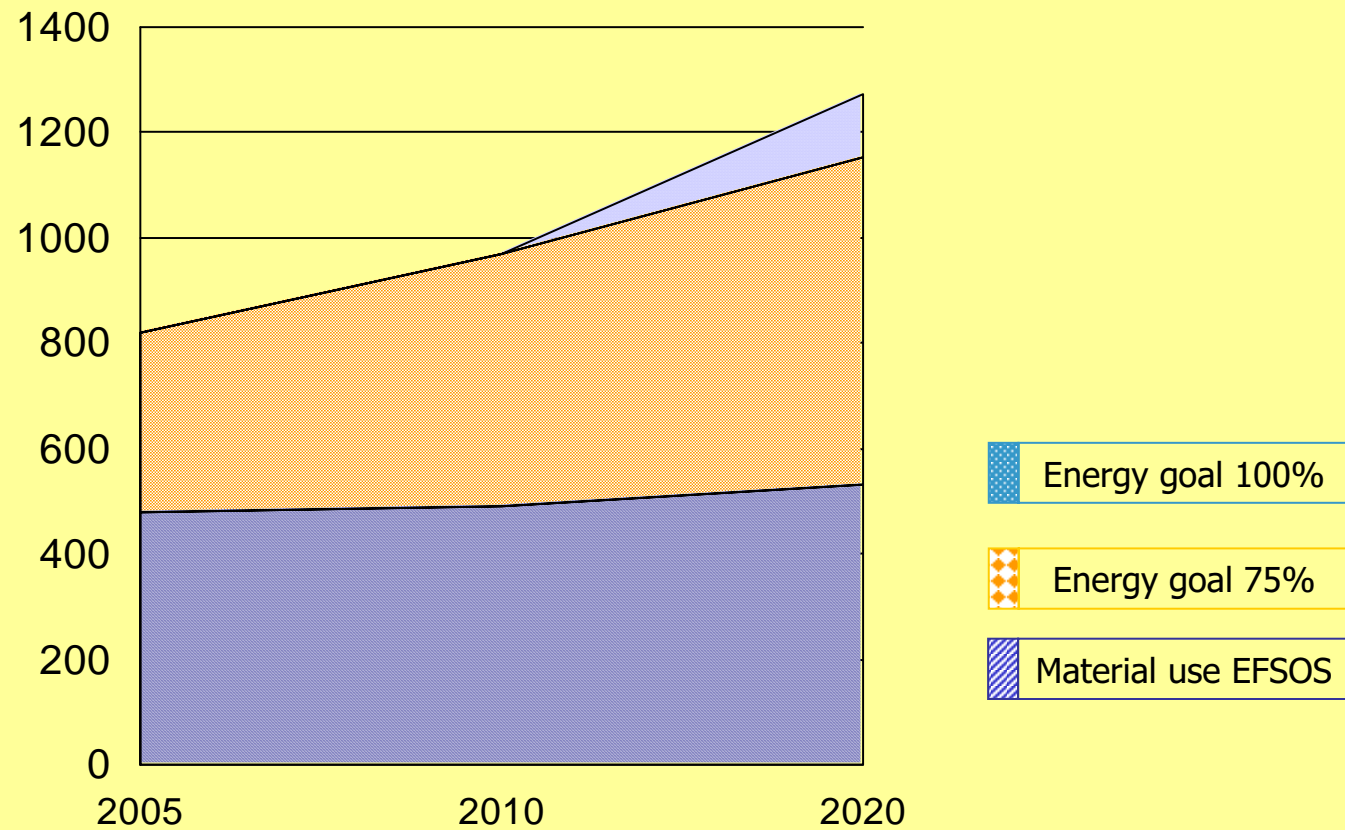


Source: UNECE / Hamburg University (2007)

# Energy use vs. material use – tomorrow ???

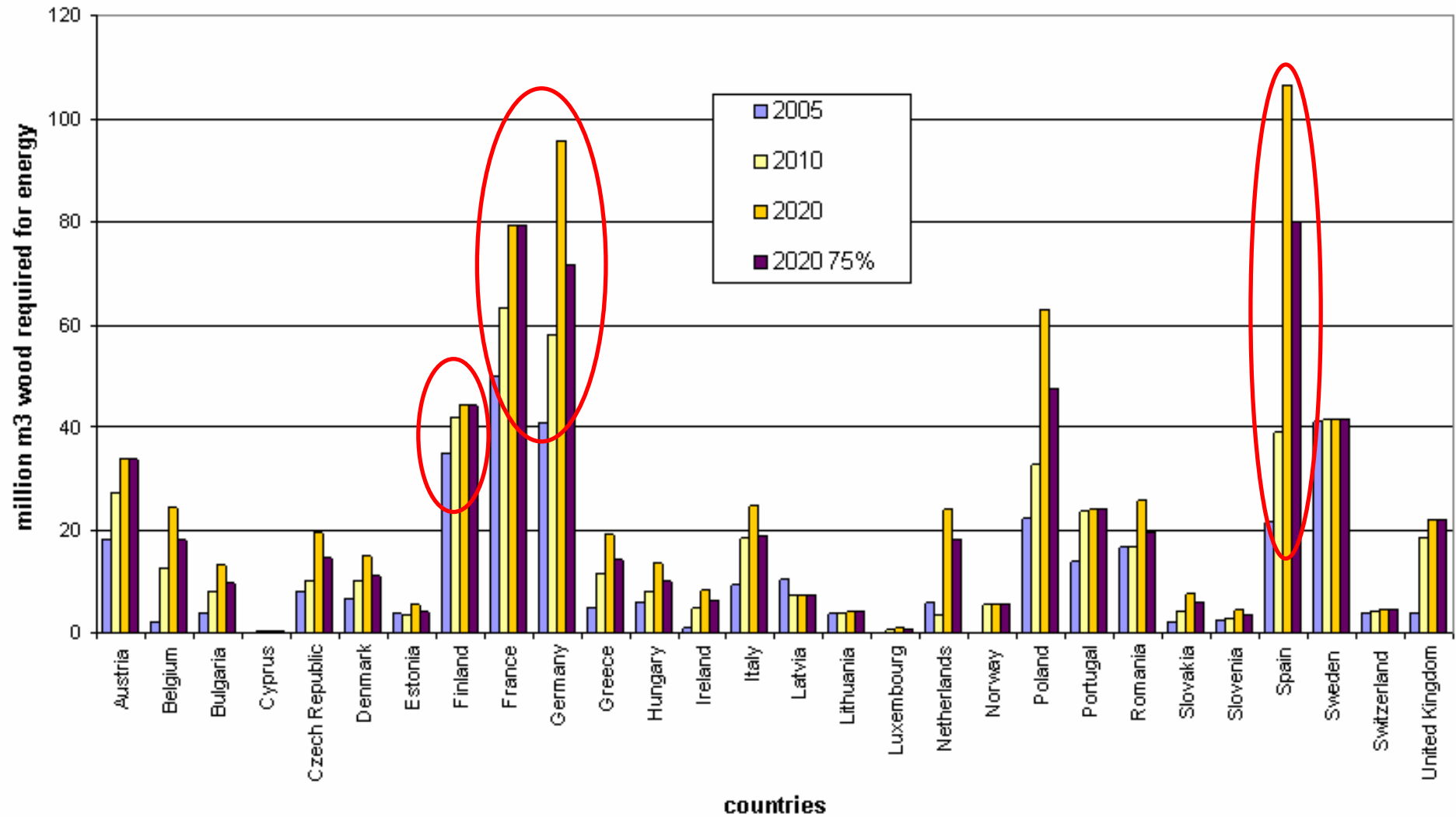


Combined wood use [mio m<sup>3</sup>] – 2005, 2010, 2020



Source: UNECE / Hamburg University (2007)

# Projecting future energy use of wood fibres



Source: UNECE / Hamburg University (2007)

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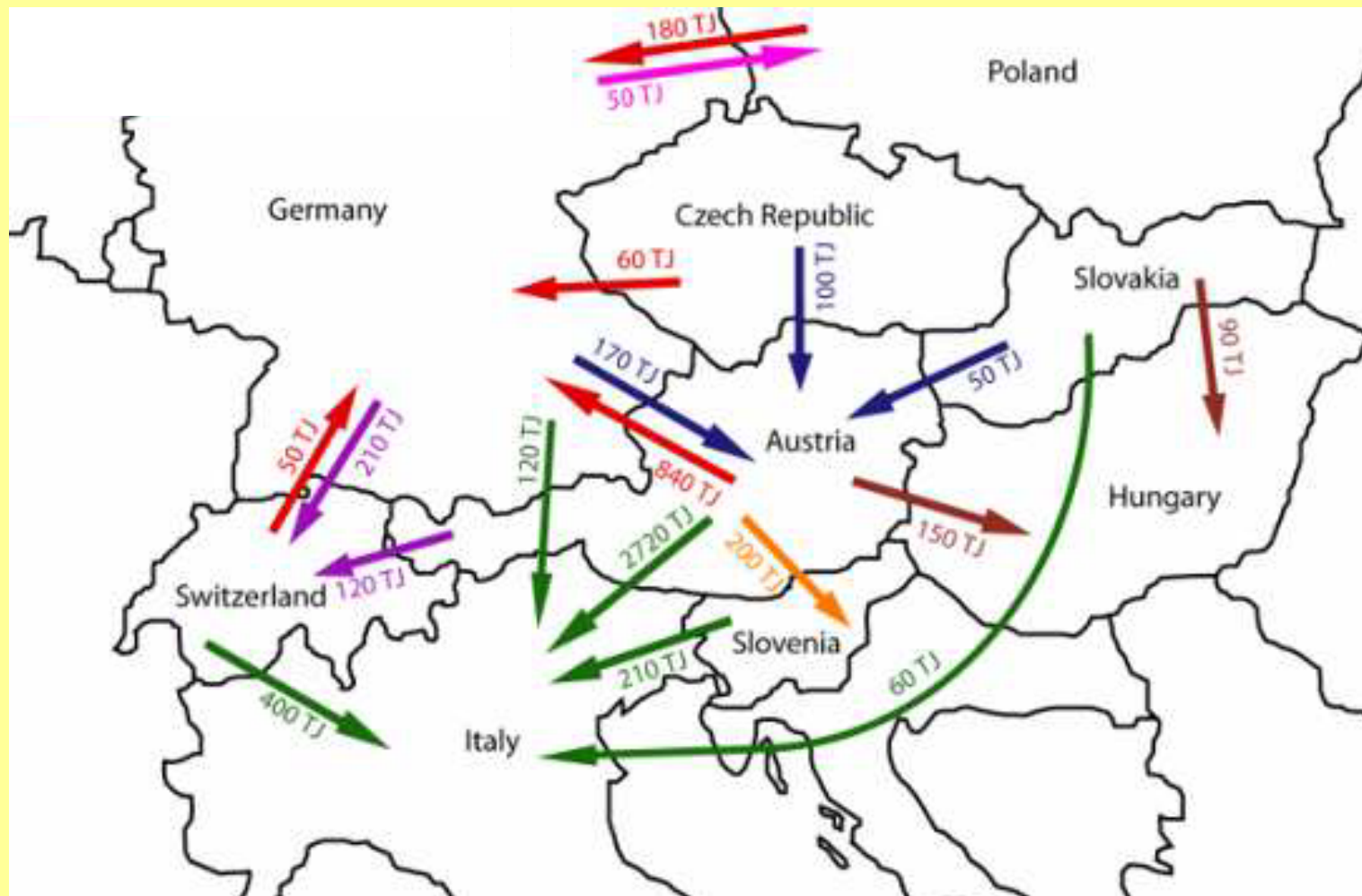




Source: Bioenergy International (No. 4 2007)

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# Cross border trade of pellets in the Central European Countries (2005)

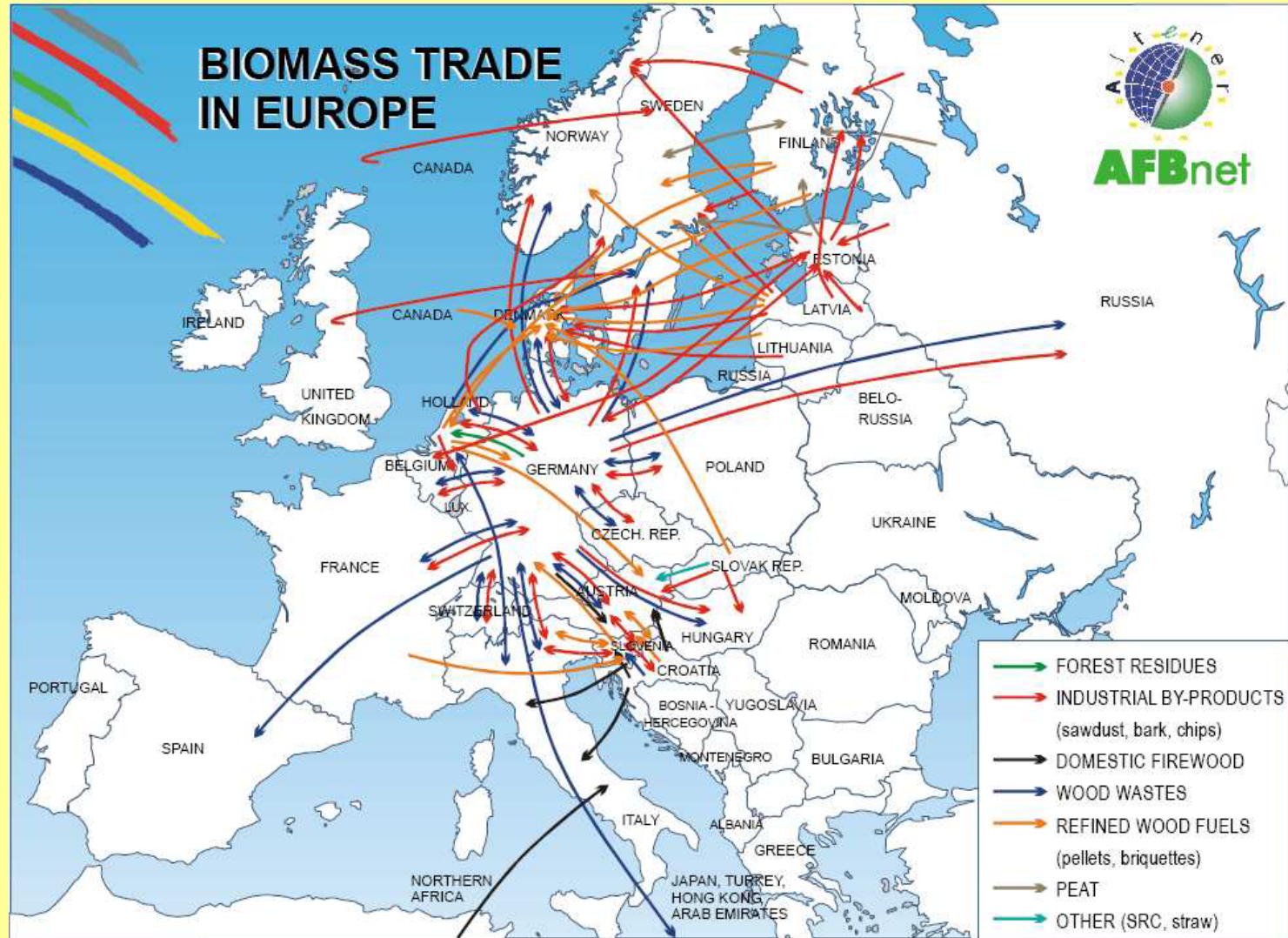


Source: Eurostat, MPO, CZSO, EEG)(taken from IEA Bioenergy Task 40: "Global Wood Pellets Markets and Industry: Policy Drivers, Market Status and Raw Material Potential" (Nov. 2007)

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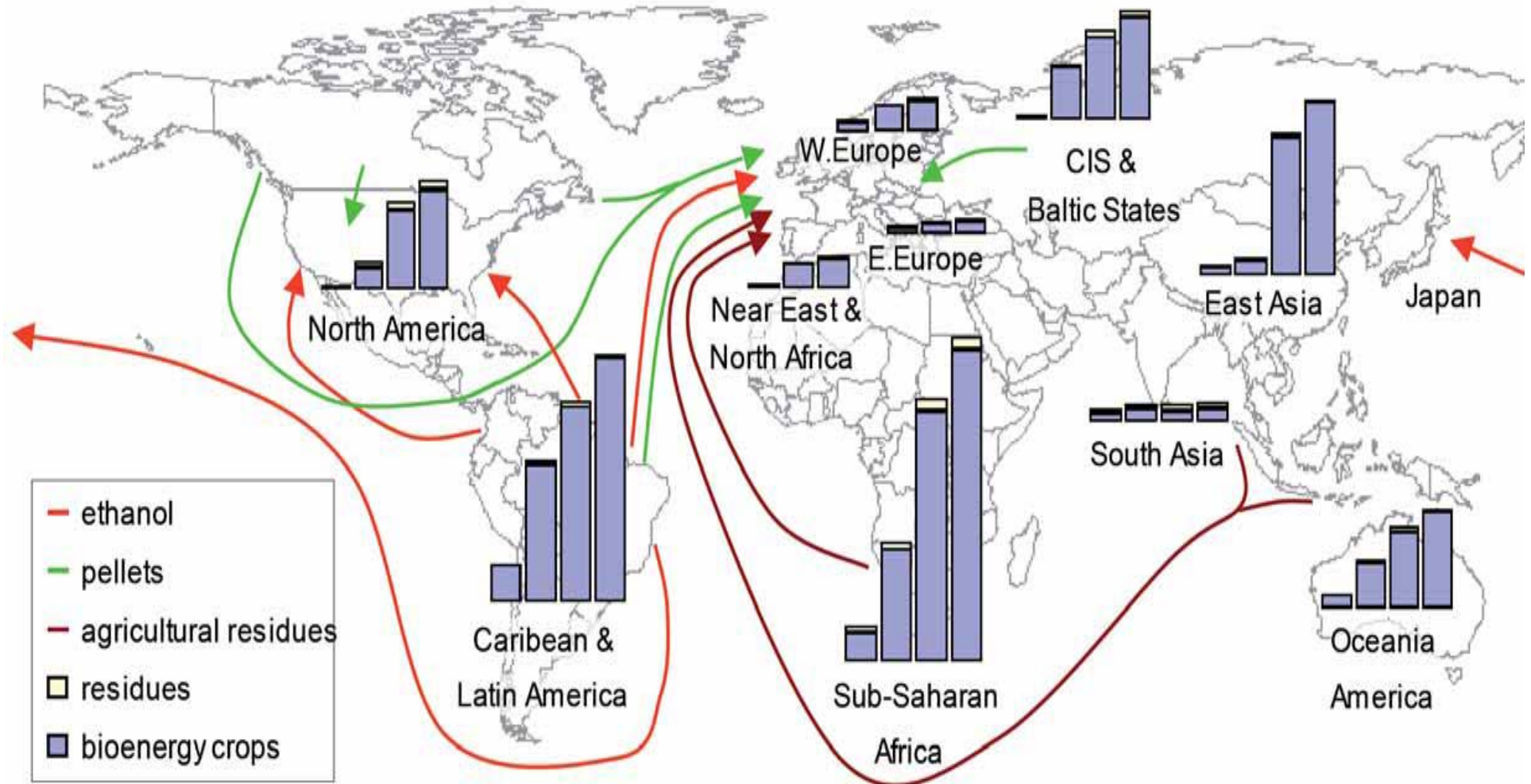
# Biomass Trade



Source: Import and export of solid biofuels in Europe, 1999. Alakangas et al., 2002.

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# International Bioenergy Trade



Source: Smeets et al, 2004

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## Conclusions:

- ✓ Wood energy N° 1 renewable energy source in EU
- ✓ Energy use of wood fibres will increase in future
- ✓ EU energy policies might increase wood fibres import
- ✓ Highest market potentials for wood pellets and briquetts
- ✓ Global trade of processed wood fuel trade will increase
- ✓ Urgent need for improved data quality on wood energy



## **International wood energy trade:**



**Domestic or imported?**

**Major wood fuel importer**

**Major wood fuel exporter**



**Markets**



**Task 39 / 40**

**Optimized energy density per volume**



**Pellets / chips**



Thank you for your attention !

Contact:

Florian Steierer

Hamburg University  
Economics of Forest Products  
Department of Wood Science

[steierer@holz.uni-hamburg.de](mailto:steierer@holz.uni-hamburg.de)

